THE STRUCTURE AND FUNCTION OF DEPARTMENTS OF MEDICINE

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ABSTRACT

The structure and function of departments of medicine are important for several reasons. First, departments of medicine are the biggest departments in virtually every medical school and in most universities with a medical school, and they are the largest professional units in most academic medical centers. In fact, Petersdorf described them as "the linchpins of medical schools" (1). Departments of medicine account for one-fourth or more of the academic medical enterprise: they include about one-fourth of the faculty of medical school, account for roughly one-fourth of the patient care and clinical revenue of academic medical centers, and their faculty perform a disproportionate share of teaching and research, accounting for up to 45% of National Institutes of Health (NIH) – funded research in some medical schools. Second, the department's ability to fulfill its role and advance its mission depends on its structure and function. Finally, lessons learned from examining the structure and function of departments of medicine may guide other departments and schools of medicine themselves in improving their structure and function.

This paper describes the issues that face departments of medicine in 2016. I begin by providing the context for these issues with a definition of a department of medicine, describing briefly the history of departments, and stating their mission.

DEFINITION

For the purposes of this paper, I define a department of medicine as an organizational unit that incorporates the disciplines of internal medicine, which are the specialties and subspecialties that are certified by the American Board of Internal Medicine (ABIM); this paper focuses on such departments. In some institutions, the department of medicine may not include a core specialty, such as cardiology or oncology, and

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other institutions have formed separate departments for many of the subspecialties of internal medicine, leaving the department of medicine as the administrative unit for general internal medicine, the internal medicine residency program, and perhaps a few other disciplines.

A BRIEF HISTORY OF DEPARTMENTS OF MEDICINE

The formation of departments of medicine as disciplinary units in medical schools and teaching hospitals was catalyzed by the creation of Johns Hopkins Hospital in 1888 and Johns Hopkins University School of Medicine in 1892, and their first four departments, Medicine, Surgery, Pathology, and Gynecology (1,2). During World War 1, the US Army considered the discipline of internal medicine to include dermatology, psychiatry, and neurology as well as cardiology and tuberculosis. By the time of the formation of the ABIM in 1936, departments were well established as the basic organizational units of American medical schools (1–3). In surgery, the formation of certifying American Boards of Otolaryngology, Orthopedic Surgery, Colon and Rectal Surgery, Urology, and Plastic Surgery preceded the formation of the American Board of Surgery in 1937, presaging the ultimate division of many departments of surgery into more specialized departments. The disciplinary content of internal medicine was influenced by the timing of the establishment of the ABIM: certifying Boards of Dermatology and of Psychiatry and Neurology were established before the ABIM, heralding the separation of these disciplines in departments distinct from internal medicine in most medical schools over the next 50 years. Unlike surgery, certifying boards for subspecialties of internal medicine were established by the ABIM after its formation. ABIM established its first subspecialty boards in 1940 in cardiology, gastroenterology, tuberculosis (and later pulmonary), and allergy as part of the ABIM itself. Thus, subspecialists were required first to train in internal medicine, likely accounting at least in part for the maintenance of these disciplines as divisions within most departments rather than encouraging departmental mitosis or exocytosis to form separate departments for internal medicine subspecialties.

The growth of departments of medicine as large units in American medical schools was fostered by growth in federal funding for research, graduate medical education, and patient care (1,2). The infusion of federal funds for research in medical school departments provided support for increasing numbers of faculty in specialties and subspecialties, beginning with the establishment of the National Cancer Institute in

1937, then with the federal Committee on Medical Research during World War II, and ultimately with the establishment of the NIH and its subspecialty-based study sections in 1945–46. NIH support for research grew rapidly after World War II, increasing more than 100-fold in 2 years to $8.7 million in 1947 and roughly doubling every 3 years until expenditures reached $701 million in 1966. In most medical schools, faculty in departments of medicine garnered more NIH support than those in any other department.

Federal support for graduate medical education began with the Serviceman's Readjustment Act of 1944, also known as the "G.I. Bill," which subsidized specialty residency training for up to 4 years. The expansion of Veterans Affairs (VA) hospitals after World War II, often in partnership with medical schools whose faculty, students, and residents provided care in many VAs, created opportunities for board-certified specialists, who were mandated in 1946 to be paid 25% more than general practitioners. The NIH also increased support for research training combined with clinical training in subspecialties, with support growing from $10 million in 1954 to $100 million in 1961. Thus, by the 1960s, training in internal medicine and its subspecialties was common.

The creation of Medicare in 1965 provided universal payment for the first time for specialty care for people age 65 and older, many of whom had been indigent and uninsured. With the establishment of Medicare, the costs of graduate medical education (GME) were reimbursed fully for the first time by all payers, leading simultaneously to higher salaries for residents and more residents at little expense to teaching hospitals (4). Although third-party payer payments for residents decreased with the introduction of the Medicare prospective payment system in 1984, federal payment for GME remains an important source of funding for academic medical centers, including departments of medicine.

MISSION

The mission of a department of medicine usually reflects that of its parent medical school. Illustrative core missions for departments of medicine are "to maximize health and eliminate suffering" at the University of Alabama at Birmingham, "to advance health" at the University of California San Francisco, "to improve medical care" at the University of Massachusetts, and "advances the health of the people of Wisconsin and beyond" at the University of Wisconsin.

Most departments specify that their core activities are caring for people, teaching, and creating knowledge, and some specify serving their

community more broadly, and some departments specify their missions in the context of these activities. For example, departments of medicine have described their missions as "to inspire interest in the prevention of disease and the promotion of human health, to cultivate biomedical discovery, and educate tomorrow's leaders for internal medicine" (Vanderbilt); "to bridge basic science, health services research and clinical care through innovative, inclusive, disciplined leadership in clinical service, education, and science," (Iowa); and "Discover. Teach. Heal." (University of California Irvine).

Even with the interplay of activities to fulfill a department's mission, the *raison d'etre* and unifying theme for every department is training of resident physicians to meet the requirements of the Accreditation Council for GME (ACGME) and the ABIM. Research is often done well in a research department or institute, and patients can receive outstanding care without research or medical education. Graduate medical education requires a department of medicine that excels in the full diversity of activities.

ISSUES FOR DEPARTMENTS

Departments of medicine consider many issues in seeking to achieve their mission. They must determine how to organize themselves based on who they include, who they wish to include, and what they wish to achieve. Departments must also relate to colleagues outside the department and to other organizational units, including administrative units of the medical school and academic medical center in which they live. I discuss internal organization and external relationships in turn.

ISSUES OF INTERNAL ORGANIZATION

For 50 or more years, most departments have consisted of divisions with division chiefs reporting to the department chair (1). Most divisions have been defined by clinical subspecialty and some have been defined by a research focus (e.g., molecular medicine or outcomes research), and as they have grown, divisions have become the dominant cultural units in departments. Divisions often duplicate many of the original functions of departments, with their own ACGME-certified fellowship training program, their own clinical and research operations, and a fair degree of financial autonomy, sometimes with the expectation that it will function as "a tub on its own bottom." Divisions, similar to

departments, exist to care for patients, to teach, and to produce scholarship that will advance medicine, and to provide faculty a supportive professional home. Most departments include a division for each major subspecialty recognized by the ABIM with a certifying examination. In fact, most divisions in departments of medicine are defined largely by their subspecialty certification and training programs: in general, division faculty members are certified in the subspecialty and they conduct an ACGME-certified fellowship in the specialty. While each division has a core set of clinical problems that its faculty are trained especially to diagnose and treat, patients with the same clinical problem (e.g., atrial fibrillation or diabetes mellitus or osteoarthritis) may be cared for by an internist in any of several divisions. Also, some patients may require treatment by a team of physicians in different specialties (e.g., urology, medical oncology, and radiation oncology for a patient with prostate cancer); this situation has led to the development of integrative cross-departmental organizational structures (e.g., a cancer service line or center or institute). Research questions and methods are often not limited to a clinical subspecialty, so research, too, is not conducted within a single division.

Departments face many questions in their internal organization: How many divisions, and how should they be defined? Should individual divisions become departments themselves? What is the role of departmental leadership and administration, and how should it be organized? What is the right size for the department?

To determine how many divisions a department of medicine will have, the department will decide when to create a new division, when to consolidate existing divisions, and when to bud off a division to create another department. Departments should create a new division, consolidate existing ones, or create a new department from a department when there is net benefit for the department and the institution. A new division might be created when splitting an existing division will improve leadership or operations; this seems unlikely when the original division is well run. More likely, a division will split when the disciplines in the division have become highly differentiated and each discipline is of sufficient size to function well on its own; this might be the case in large divisions of hematology and oncology, gastroenterology and hepatology, and general internal medicine. The splitting of divisions along subspecialty lines may achieve more homogenous compensation in each new division when market forces have led to differential compensation between subspecialties. A new division might also be created to build a new program, such as human genetics or molecular medicine or palliative care, when the department seeks to provide

the new program its own place in the sun and to recruit a leader who wishes to head an independent division, rather than base it in an existing division. Divisions might be consolidated for the same general reasons, to improve leadership or operations, or to create a group that will be more attractive to existing and prospective faculty.

Should individual divisions become departments in their own right? Although departments of medicine are remarkable for having maintained themselves while growing in size and complexity, splitting the department may have consequences that will be advantageous to some. Insofar as chairs have weight in a medical school or academic health system, the organization's councils may function more like the Senate than the House of Representatives, and the chair of medicine may have a vote equal to that of chairs of much smaller departments. Thus, the raw political throw-weight of internal medicine would increase if each division became a department with its own chair. Nonetheless, departments of medicine rarely spin off divisions to become independent departments, and when an independent department is formed with a medical subspecialty, it may be related to the structure of the overall institution. For example, in an academic setting with an independent cancer hospital, oncology may stand alone in the cancer hospital, separate from the department of medicine and linked more closely to other cancer-related specialties, including surgical oncology, radiation oncology, pathology, imaging, and palliative care. In some institutions, subspecialty-based departments and programs exist without the overarching structure of a department of medicine.

What is the role of department leadership, and how should it be organized? The overall responsibilities of the chair are to assure that the department has the best possible faculty and trainees (who will produce outstanding research, education, and service), that the department has adequate resources and that they are used well, and that the department relates effectively to other stakeholders. Large departments have developed leadership structures that include faculty who assist the chair in advancing the department. Two responsibilities remain primarily the chair's: articulating and stewarding the vision and values of the department, and managing its leadership structure, assuring that the department has excellent division chiefs and other leaders who work well together. Success in creating the department's leadership structure leads to the ability to answer the question, "Who will do your work when you are on sabbatical?" "The same people who do the work when I am here," as Marvin Sleisenger is said to have responded when he was Chief of the Medical Service at the San Francisco VA Medical Center (VAMC).

As departments have grown and divisions have become as big or bigger than other departments in the medical school, divisions have become the cultural and operational units of the department, and faculty identify with their division, or even their section in a division, as their home. The division chiefs play key roles, as indicated by Holly Smith's adage that "the chair is the shepherd of the flock of faculty, and the division chiefs are the crooks on which he leans."

Core responsibilities that lie with the department and not with any one division include the residency program, appointment and promotion of faculty, and stewardship of funds, space, and people. Thus, many departments have developed structures that include faculty leaders who work closely with the chair, often called vice, associate, or assistant chairs who are directly responsible for focused domains. The role of residency program director has most often been delegated by the chair, and a vice chair for education may oversee undergraduate, graduate, and continuing medical education, including the development of teachers and educational scholars. The chair of the department's committee for appointments and promotion is a key leader, and this position may become the vice chair for faculty affairs. The degree to which other responsibilities are delegated to a vice chair or to the division chiefs varies.

Many departments have assumed greater responsibility for achieving goals that were previously left to the ambitions, capacity, and idiosyncrasies of individual divisions, with the overall goal of achieving certain benchmarks of excellence and productivity. For example, as ACGME requirements for subspecialty fellowships became more complex under the Next Accreditation System, the vice chair for education may play a greater role in supporting the subspecialty fellowships in meeting ACGME requirements. A vice chair for faculty affairs and faculty development may mentor faculty through the promotion process and also develop department-wide programs for faculty development in different domains such as research, education, personal improvement, and leadership. A vice chair for research may develop and direct department-wide programs for faculty recruitment, development and support of mentors, recognition of excellence, and funding of pilot grants, bridge funding, and grants to nurture multi–principal investigator and trans-division or trans-department projects. A vice chair for clinical affairs can support clinical activities in each division by improving the efficiency of operations and in helping to fit clinical programs into those in the rest of the medical center. A vice chair may also be responsible for monitoring quality and safety across the department, identifying opportunities for improvement

and implementing improvement efforts. Responsibility for allocation of space among divisions may also fall to vice chairs for research and clinical affairs.

New leadership roles have developed in some departments. An executive vice chair may have responsibility for financial management and even management of the division directors. Thus, the department of medicine may become a miniature of its parent university, with the executive vice chair functioning similar to a provost responsible for internal affairs while the chair functions as the president responsible for managing the department's strategic direction and relations with the rest of the school and university, and the local and national communities. Vice chairs may also lead strategic planning and implementation and efforts to develop the department's culture as one that will best attract and nurture the diverse faculty, learners, and staff needed to achieve excellence in the department's work.

What is the right size for a department? Goldilocks' answer "just right" applies to departments of medicine as well as to porridge, chairs, and beds: the right size depends on the observer and the observer's judgment whether the department's size fits its mission. Considerations include whether the department has the right number of divisions in the right areas to accomplish its goals. One might then ask, does each division have the right number of faculty to accomplish its goals? To answer this question, one must consider the work to be done and the resources available: What patients must be cared for? What students and trainees must be taught? What research is desired? What work in the institution and the community needs to be done? and What resources are available to support the faculty in this work? Division chiefs, vice chairs, and the department chair must answer these questions, informed by stakeholders and institutional leaders. The investments needed to recruit faculty will often be beyond the capacity of the department's operational revenue and may require institutional support. Recruiting a leading investigator or one with great potential, for example, may require an investment of $1 million and sometimes more. Similarly, recruiting faculty to develop a prominent clinical program will require funds beyond those that will be generated by physician services alone, certainly during the start-up phase and often when the program is in a steady state; such a program will require institutional investment that must be justified by the program's overall effects on patients, reputation, and finances.

Can a department become too big? Although there is no law of nature that requires mitosis or budding of departments, departments have proliferated in medical schools. A department has become too big when

its goals are better achieved as two or more departments rather than one. This results from issues of autonomy, authority, and power: when a leader of a unit within a department decides that she wishes to have authority and resources independent of the original department, and when the department leader decides that maintaining that leader and unit within the department is not worth the work entailed, the department will split in two. Thus, the multiplication of departments, mostly outside of internal medicine, results from choices to have more departments of smaller size rather than to have existing departments grow in size.

ISSUES OF EXTERNAL ORGANIZATION

How should departments of medicine relate to other departments and to extra-departmental structures in the academic medical center? Most often, the academic medical center is a federation of departments, to each of which the school delegated authority to appoint faculty, usually in a specific discipline. Departments are co-dependent in caring for patients and often in teaching and research. For the good of the institution, for patients, for learners, and for its own good, a department of medicine should relate to its sister departments with mutual respect and thoughtfulness. Some clinical programs will be possible only with teams working closely together; programs in the management of structural heart disease illustrate the need for such teams. Departments will also need to navigate and negotiate boundary disputes. For example, medicine, surgery, and radiology may each wish to perform the same vascular procedures, and conscious sedation that was once performed by the physician performing a procedure may now require an independent physician, most often in anesthesia.

Extra-departmental structures (often called centers, institutes, units, programs, and service lines) have proliferated over the last 20 years (3). The goals of these structures are laudable: they seek to promote more effective and efficient care for patients with a particular condition, and/or they seek to promote research in an area that engages faculty in different departments. For example, a cancer center might have programs in each of several cancers (e.g., lung, breast, pancreas, prostate), and each program might include physicians from the different departments involved in the care of patients with the cancer. In the extreme, a center (most often in cancer or heart disease) might become an independent hospital, either owned by the academic medical center or independent of it.

The creation of a center will affect the culture, structure, and function of departments, the school, and the medical center itself. Centers have the advantage of focusing leadership and resources in a particular area to a degree that is often beyond the capacity of an individual department or even of departments working together. Centers pose challenges, too. The structure alone does not assure effective leadership or the commitment of sufficient resources; and the structure increases organizational complexity and costs and raises questions of authority and responsibility. Will the center assume primary responsibility for faculty recruitment, development, and compensation? Or will the center contract with departments for physician services, leaving primary responsibility for recruitment, development, and compensation with the departments? It is also important to decide whether the center will focus on patient care or research or both. In addressing these questions, it is most important that choices are made and that the answers and expectations are clear and unambiguous.

FUNDING

The ability of a department to thrive depends on its funding as well as on its structure and the quality of its faculty and leaders. Departments of medicine have several sources of funds, which may include the following: university operational funds (including allocations of state funds by public universities); clinical revenue from caring for patients directly; contracts with the medical center and with outside entities for services; extramural grants, including indirect cost recovery; income from endowments, patents, and licenses; external activities; philanthropy; and affiliated VAMCs. These funds must be managed to compensate faculty, staff, and trainees, and to invest in clinical and academic programs. Therefore, the more sources of funds and the more lucrative the sources, the better able the department will be to accomplish its mission.

University operational funds allocated to departments are generally shrinking, with the possible exception of funds allocated to departments, sometimes called "the chair's package" and often on appointment of a new chair, for growth in the excellence and scope of its programs. Thus, the financial health of departments depends increasingly on the other revenue streams, which have the potential for growth.

Clinical revenue is under the direct control of the department and faculty, but the flow of these funds is increasingly constrained. Reimbursement for many procedures has decreased, the work of practice

has increased (e.g., many faculty say the electronic medical record has decreased the number of outpatients they can see in a given time), and the increasing complexity of billing (e.g., with provider-based billing, the implementation of the International Statistical Classification of Diseases and Related Health Problems, 10th Revision [ICD-10] billing codes, and the delegation of billing and collections to external vendors) can decrease revenue. Most importantly, when medical practices are owned or operated by the medical center or health system, the allocation of clinical revenue becomes a point of negotiation.

Contracts may provide additional revenue for work in the medical center that is not reimbursed directly by clinical revenue (e.g., quality assurance and improvement) or for work in external facilities (e.g., dialysis centers, long-term care facilities, or other hospitals). These contracts are sometimes lucrative, and they always pay for professional work that would otherwise be unreimbursed.

Extramural grants pay for research and sometimes for education. While they are generally thought to pay only a fraction of the actual costs, some are lucrative. For example, career awards, especially for midcareer and senior faculty, may pay for substantial effort, and industry grants may yield residual funds upon completion of the work that can be invested on other activities.

Endowments are the department's foundational financial capital, the keel that maintains momentum and balance through the headwinds and rough seas each department will navigate. Endowments increase the department's independence in sustaining its core mission. Thus, creation of endowments should be a high priority for any department that plans for the long term, and they increase capacity to recruit the best faculty in a competitive environment. Appointments to endowed positions may be made for a term, with a review to determine that the expectations are met so they do not become sinecures. Income from patents and licenses can also benefit departments, but the value of this intellectual property is unpredictable and time-limited.

Gifts other than endowments provide funds that will support activities that a department cannot otherwise undertake, whether they are services for patients and families, support for learners, faculty development, or research. Alumni of residencies and fellowships, grateful patients, and planned gifts can provide substantial support.

For many departments of medicine, the affiliated VAMC is an essential partner in supporting graduate medical training, research, and faculty effort, and the management of this relationship advances the department. Part-time VA appointments may provide the greatest opportunities for mutual benefit of the university and the VA.

The external activities of faculty as consultants or experts provide another potential funding stream for departments, although customs vary among departments with regard to whether such income accrues only to faculty or will also benefit the department. These activities raise questions of conflicts of commitment and of interest that must be managed, and they can affect the public's perceptions of medical schools as well as faculty.

CONCLUSION

Departments of medicine have become influential units with roughly one-quarter or more of the faculty, graduate trainees, staff, and clinical revenues of most medical schools, and often with a disproportionate share of extramural research funding. They remain the "linchpins" Petersdorf called them 35 years ago, and they have continued to grow in influence and complexity. Departments face issues of internal organization with increasingly complex structures and growing external demands. In fact, departments of medicine in research-intensive universities have become the organizational units where the demands of care and service, education, and research percolate most intensely, compared to departments focused more on either care or research. Departments of medicine also face challenging issues of external relationships as cross-discipline collaboration and efficiency have become increasingly important to the health of academic medical centers and as centers, institutes, and service lines have been developed to coordinate care and research across departments. Because departments of medicine attract and develop the faculty who fulfill all the missions of the academic medical center, it is critical that those departments have the resources, responsibility, and authority to sustain the ability to attract and develop their faculty. The intentional and skillful development of effective leaders is essential to the success of departments and their home institutions.

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DISCUSSION

Annex, Charlottesville: Terrific talk. When you got to the end, you talked about pre-existing programs and sort of stuck on that slide. Having gone through, over a number of years, with innumerable relooks…all these things seem to work perfectly. If you could start with a blank sheet of paper and put all the pieces in, but invariably you have got history, you have got faculty with longevity, you have programs with longevity. I am just curious how you face that, because it just seems to me that is just a major hurdle that we haven't figured out how to address?

Landefeld, Birmingham: Paul Starr stated that "the dream of reason did not take power into account." Coming to the South, I have always lived north of I-80, and now I am in the South and need to learn that the past is always present. So I think this is really a critical point. We have to live with the history; we have to live with the context which is really peculiar to each of our institutions. But I think the key thing is to ask what are our priorities going forward and are we realigning our resources in that way? I think one of my big jobs is developing the faculty for the future. Are we putting enough resources into the junior folks and not simply supporting the older folks? I can tell you, if you look at the 990s that are available online for our practice plan, you will find that there are a lot of resources going to folks that don't represent the future. These are important questions to ask.

Baum, New York City: Taking off from your slide, power trumps reason. One of the big problems I think in being a chair of medicine these days is the fact that the chair used to actually play the role of Robin Hood: stealing from the "rich" — cardiology, gastroenterology; and giving to the "poor" — infectious disease, rheumatology, endocrinology perhaps. And that dissolution of the department structure where hospitals have cleaved off the money makers has really taken the ability to function as a chair and minimized it considerably, in my thoughts.

Landefeld, Birmingham: I think it's a great comment and there is probably tremendous variation across departments. Our place is very department-focused, so there is a lot of autonomy in shifting funds around. The most interesting thing in going to a funds-full-model 2 years ago, is that our most lucrative division, previously GI, is now our (if you look at on a division by division basis) biggest charity case, because of how money comes in. So I think it really emphasizes how we need to look at the department as a whole to be able to move funds to support the different missions.

Duffy, New Haven: When I left Baltimore and moved to New Haven, I was challenged by many people as to what was the specialness about Sir William Osler. Some believed that he was terribly over-praised and New Haven had its own Sir William Osler, who was Paul Beeson — and Paul Beeson recognized how much he was revered by the people in that community. I always joked that when you mentioned Paul Beeson's name many people would literally genuflect. So I made it my business actually to find out what was the source of Paul Beeson's greatness and reviewed his correspondence. What I was forced to conclude was that Paul Beeson's greatness was not as a scientist, not certainly as a great clinician, but his presence was a wonderful moral force. We behaved well because we did not want to disappoint Dr. Beeson. So my point is that medical schools, and departments of medicine, are actually moral forces and its leaders should be chosen who

have demonstrated a record of some moral leadership, in addition to all of the other wonderful qualities. It's a force that should not be overlooked and I believe that it becomes a driving energy that really stimulates everyone to get on board to follow their leader.

Lee, Boston: I remember about 20 some years ago, you wrote an article in the *New England Journal of Medicine* called "The Spring Meetings — Are They Dying?" And I am sure many people here remember because we all got really depressed because the answer was yes. But that kind of cross-disciplinary learning that the tri-societies meetings were so good for — there is clearly a growing need for it. So can modern departments in medicine now foster that cross-disciplinary learning that you were writing about back then as going out of style?

Landefeld, Birmingham: I think it's a real challenge, I think it's a good opportunity as well. Actually one of our main goals in the department at UAB this year is to make medical grand rounds "a don't-miss conference." It's well-attended now, probably largely because we provide everybody a great lunch! (There is a lot of barbeque.) But we want to make it something that is fertilizing across the whole department. The one thing that will get everybody together. We are going to invite Steven Colbert so that everybody can come watch. I think there are opportunities, and that is a key function for the department. Thank you, Tom.

Gotto, New York City: I just wanted to call attention on to one aspect of differences in departments of medicine and chairs of medicine where the chair is also the physician-in-chief of the hospital. There is a more direct reporting responsibility to the CEO of the hospital and the dean of the medical school. It is somewhat different in places where the chairman of medicine may negotiate with different hospitals but isn't really in charge.

Landefeld, Birmingham: It's a great point in having that close relationship as physician-in-chief I think is part of what can help to get the resources that one needs.

Feldman, Philadelphia: Very nice talk. I think there are two huge threats on the horizon that we all have to start thinking about that may change what we are doing if we don't. The first is little known fact that the LCME just approved the first for-profit allopathic medical school in the U.S. So soon, trustees and college presidents will be starting to ask, why is our medical school costing us money when obviously other medical schools are making money? And this is going to be kind of a real shift in thinking. The second threat that we are seeing in our environment, that is starting to come into other environments, is price-steering — so the insurers are directing patients to the low-cost hospitals not to the high-cost hospitals regardless of the quality of care that we provide.

Landefeld, Birmingham: Well I don't have solutions. I think they are very important threats. I think thinking about the financial liability of this school itself is critical and I don't have a good answer for the trustees on that. I think with regard to the competing on price alone, and the possibility of bottom feeding, I think that we really need to look back at some of the things that were successful when we emphasized our social contract in delivering the best possible care. And we also need to be able to do that in efficient ways. I think that our system should be among the most efficient and we certainly have not always tried to do that. I think that is an important call.

LeBlond, Billings: I just like to comment on the necessity of retaining the whole of the department of medicine, having moved to start a residency program in an institution which is basically deconstructed internal medicine into its component disciplines as separate departments. They all have developed sort of negative repulsive forces. Very difficult to bring them together and from an educational point of view and that poses very, very big challenges in terms of getting collaborative efforts at education. So we need to retain the nuclear strong force, whatever that happens to be, in the departments of medicine as a whole. Because it's that scope within the institution that really spans the

patient as the whole person. And we have to bring that together for educational reasons but also for patient care, collaboration, and coordination of patient care.

Landefeld, Birmingham: Thank you Richard. I think you put your finger on that nuclear strong force and that is the value of education which really holds us all together.

Ludmerer, St. Louis: Thanks for your fine talk and kind remarks that you made. Tom Duffy's comment prompted me to make this comment: Tom is absolutely correct that Paul Beeson was a strong moral force as was Willis Hurst and Mac Harvey and Eugene Stead and so many others including many past and present members of this organization. But the challenge going forward is that Paul Beeson would find it much more difficult to be Paul Beeson today, because his department was a much smaller and simpler department than the ones we have today in terms of the number of residents, the number of faculty, relatively small budgets, very few administrative regulations, and much less bureaucracy. So this allowed him and many others to have a personal presence and personal impact on faculty, on house officers and so forth that it is much more difficult to do today because of the vast increase of size and demands and complexities. As you have thought about the organization that departments, there is no easy fix. But do you see any approaches that today's chairs might be able to take to have a fuller personal presence and more closely approach the role that Paul Beeson played and the chairs and the past played, in terms of their personal impact on learners and faculty?

Landefeld, Birmingham: I think two thoughts on that: One, during my first week in Alabama I had lunch with a former CEO who is a country boy who said, the one thing you have to do is get out of your office. So I think just spending time rounding, whether its clinical rounds or talking to folks is critically important. The other is having great division chiefs. Holly Smith taught me that he is the shepherd and the division chiefs are the crooks on which he leaned. You want to have good crooks running your divisions. They will have personal presence as well.

Luke, Cincinnati: Thank you for a very important topic. And I speak as you know from some experience. I think that the chair must remain the champion of the medical students and residents. And with all the turmoil about money, etc., I remember often asking, why did we have a medical school? One of the principal functions is to train good doctors but it tends to be forgotten. My final comment is that centers are great for research but don't care about teaching.

Landefeld, Birmingham: Robin, I think your emphasis on the critical point on education can't be said enough. Thank you.

Carethers, Ann Arbor: I was wondering if you could comment about keeping the cohesiveness of internal medicine. And there have been a number of experiments in some department of medicine. Cardiology has split off, and someone mentioned other departments where they separated other components. There have been a couple of experiments where areas like hepatology and GI have split off and have caused some consternation with some of the trainees. After that experiment, some have fused back together. I was wondering if you could make comment on that.

Landefeld, Birmingham: I am a generalist. My bias is that we need to keep things together and I think that we are blessed in internal medicine by our educational mission which really gives us a strong centripetal force to hold things together. I think it's also important to realize that what one is going to split off today may change tomorrow. One of the things my division chiefs will ask is if they would be better off on their own? I tell them to look at the finances 5 years ago. You might have been better off on your own then but now you are a lot better if we are all pulling together. Ben Franklin said, "We must all hang together, or assuredly we shall all hang separately." I think that in medicine we are better hanging together than risking being separate.

Rothman, Baltimore: I hate to do this, but I am actually going to comment and not ask a question. I have a couple of comments and I will try to bring some of the questions into a cohesive comment. It has to do with the economic drivers in academic medicine. They are sometimes driving us to have structures or mechanisms of delivering care and research. There comes this idea that we have talked about — the role of centers and research, and the fact that education may take a backseat — when we think of interdisciplinary care models or we think about interdisciplinary research teams. I think it is actually departmental leadership that is going to ensure the core mission is served here.

DuBose, Winston-Salem: Thank you very much for your comments. I just wanted to mention that one of the threats to the classical structure of departments of medicine these days which has already been alluded to, is reorganization of medical centers into a corporate structure. I would suggest that the role of the chair as a team leader becomes critically important and requires a special type of leadership which has been described. You may be interested in reading about leadership by Warren Buffet as a servant leadership. The importance of servant leadership in a department, in my view, is to help every individual and the department find out what they do best and what they can do under new structures so that they fulfill the mission of the department but at the same time to keep the department structure intact.

Landefeld, Birmingham: Thank you Tom, I think it's a great model — an aspirational goal for all of us.